

Comments Received on EPA's Proposed Additions and EPA's Responses to Comments

Application of Sediment Management Standards

- Issue 1. Commenter 1:
Section 303(d) does not authorize the listing of contaminated sediments for the purpose of requiring sediment clean-up.
- Issue 2. Commenter 1:
EPA's proposed TMDL listing of water bodies for sediment quality standards exceedances creates conflicts with Ecology's overall sediment management programs, the Washington Model Toxics Control Act and EPA's own Superfund Program. EPA says waters where SQS violations occur, must stay on the list until SQSs are attained.
- According to the SMS, these sediments which meet the sediment minimum clean up level (MCUL) but not the SQS, are considered in compliance and do not require further clean up. Keeping the sediments listed would require further clean-up beyond that required by Washington's SMS.
- Issue 3. Commenter 1:
To avoid regulatory conflict and unintended consequences, the cleanup of contaminated sediments in Washington waters should be addressed either under the authority of the Washington Model Toxics Control Act, Federal Superfund or the clean up authority of the SMS but not through Section 303(d) of the CWA.
- Issue 4. Commenter 1:
EPA's Contaminated Sediment Management Strategy recognizes that §303(d) should not be used as an additional authority to require the clean-up of sediments but rather should be used to set load and waste load allocations for sources which contribute to ongoing sediment contamination. The Strategy does not endorse the use of TMDLs to require cleanup of contaminated sediments. EPA should follow its own strategy.
- Issue 5. Commenter 1:
The proposed additions to Ecology's 1998 §303(d) list contain an additional 71 water bodies/pollutant listings based solely on an initial SMS designation as a contaminated sediment. Ecology had determined not to list any waters solely on this basis since the chemical criteria are the first step in determining whether a sediment requires remediation, not a final determination of ecological health. Rather, Ecology concluded that confirmatory designations under the SMS rule were necessary before a listing could be proposed. (See specific comment

indicating this remark.)

EPA's approach appears to be based on a fundamental misconception concerning the role of the SQS in the SMS rule. The SQS were derived from AETs to establish a cleanup goal and to give an indication of where potential problems may be present due to contaminant concentrations. They are not based on cause/effect relationships between concentrations and ecological harm, and only serve as a goal and a conservative screening tool.

- Issue 6 Commenter 1:
Inclusion of waters based on exceedance of the SQS will cause unnecessary confusion and expense for the region and may result in significant expenditures on remediation efforts that would provide little or no environmental benefit and would not be required under programs the SMS were designed to operate.
- Issue 7 Commenter 1:
EPA should defer to Ecology's interpretation of its own state standards on the listing process for sediments that exceed the SQS.
- Issue 8 Commenter 1:
EPA's proposal for listing waters that exceed the SQS and the implications of those listings can only be avoided by revising these listings to include only those which exceed confirmatory tests as well as initial designations and by clarifying that sediment listings do not authorize or require contaminated sediment cleanups.
- Issue 9 Commenter 2:
EPA is forcing a square peg in a round hole. In recognition of the great difference between water column and sediment, Washington's sediment standards were designed and approved by EPA, to be site-based not sample station based. Detailed procedures define any "site" in violation of standards such that remediation actions can be clearly defined and proceed in an organized fashion. The current proposal violates an agreed-upon approach that is being planned for and implemented by many State entities. This is a creative approach for addressing sediments. The commenter recommends sediment listings be dropped.
- Issue 10 Commenter 5
The effect of listing down to the SQS is to make the SQS the regulatory trigger level for action. This is contrary to the state's regulation which clearly uses the CSL as the regulatory trigger for action. The entire Sediment Management Standards regulation was reviewed and approved by EPA as a water quality standard in 1991. That approval was not limited to just the numeric SQS table. In 1995, EPA's Region 10 administrator Chuck Clark, joined the agency heads from the Seattle District Corps of Engineers, the Department of Ecology, DNR, and the Puget Sound Water Quality Authority in an agreement solidifying this approach.

Clearly, EPA and Ecology have already reached agreement at the highest level as to which standards (SQS or CSL) are to serve as regulatory action levels. They have decided on the CSL. EPA §303(d) staff should not override this earlier decision.

Issue 11 Commenter 3:

Boeing believes that EPA is misrepresenting both the wording and intent of the sediment management standards in proposing to add the 71 waters. Boeing believes that EPA is misapprehends how the SMS are intended to operate and we do not agree that an exceedance of a numerical value in the SMS indicates that effluent limitations are not stringent enough.

Issue 12 Commenter 3:

The numeric values for marine sediments contained in WA's SMS are intended to provide a screening value for initial identification of areas of concern. The numeric values were never intended to be used in a manner that would justify their inclusion in this TMDL listing.

Issue 13 Commenter 3:

Boeing firmly disagrees with a notion that exceedance of a numerical value alone requires a conclusion that effluent limitations are not stringent enough to implement water quality standards (the CWA 303(d)(1)(A) criterion). Additional provisions of the SMS makes this quite clear. While the mere exceedance of the initial set of numerical values may cause placement on the State inventory, it does not trigger cleanup by itself and cannot by itself require the conclusion necessary to require a water body to be placed on the 303(d) list.

Response: The following is EPA's response to Issues 1 -13.

EPA included 71 proposed listings based on non-attainment of Washington's water quality standards for sediment. Washington submitted its sediment management standards to EPA for approval under the Clean Water Act, and EPA approved them. Therefore, in some instances in Washington, there are two sets of standards which apply to a water body for a specific pollutant, e.g. those which are applicable to the water column portion of the water body and those which are applicable to the sediment layer of the water body.

In addition, the sediment management standards contain (1) sediment quality standards (SQS), which are used as the basis for source control, and (2) cleanup screening levels (CSL), which may be used to trigger active sediment cleanup under the state's Model Toxics Control Act (MTCA) and which define the minimum cleanup levels to address contaminated sediment sites. While the minimum cleanup screening levels, in most cases, are not as stringent as the

sediment quality standards, the actual cleanup levels for contaminated sediment sites are determined on site-specific basis after consideration of public health and aquatic life protection and efficacy and cost of cleanup techniques. The State of Washington also uses Water Pollution Control Authority 90.48 RCW and 401 Water Quality Certification under the Clean Water Act to conduct cleanups as well.

Under the plain language of the sediment management standards, non-attainment of the sediment quality standards requires listing the water body as impaired under section 303(d) of the CWA. EPA had specific information that the sediment quality standards were exceeded for the identified water bodies. Many commentors expressed concern for how §303(d) listing would affect the MTCA program. Specifically, they want to know if the TMDLs will require contaminated sediment cleanup to attain the sediment quality standards, thus making them, rather than the cleanup screening levels, the applicable minimum criteria. EPA believes that the cleanup screening levels and not the sediment quality standard, to be the required minimum criteria for active remediation of contaminated aquatic sediments.

In general, the outcome of a water body's listing on the §303(d) list is a requirement that the state develop a TMDL for that water body for the identified pollutant. The TMDL requires an assessment of both point and nonpoint sources of the pollutant, calculation of a loading capacity for the water body, and wasteload allocations for the point sources and load allocations for nonpoint sources to assure the loadings will not exceed the water body's loading capacity, thus attaining water quality standards. NPDES permits issued to point sources discharging to waters for which a TMDL has been issued must be consistent with the wasteload allocation. The Clean Water Act does not specifically identify how load allocations are to be attained.

The 71 water body/parameter pairings proposed to be added by EPA to the State's 1998 §303(d) list were based on non-attainment of the sediment quality standards of the sediment management standards only and not the water quality criteria applicable to the water column. Data showed exceedences of the SQS for listed pollutants for the sediment layer of the water body. (Refer to the Appendix K, "the Candidate List Decision Matrix", from the State of Washington; Administrative Record Document 11).

The sediment management standards are unique in two ways: first, they are the only CWA-approved standards that explicitly apply to the sediment layer; second, they include a cleanup program for attaining these CWA-approved standards. The effect of these two features is the basis for EPA's analysis regarding TMDLs. With regard to the 71 waters that EPA proposes to list, TMDLs and MTCA

cleanups would both focus on attainment of the CWA-approved sediment management standards. The TMDLs for such sites will identify and assign allocations to any **discharges** to the water body that impact sediment quality, e.g. to those discharges that would further degrade sediment quality. The affect would be to reduce or eliminate further contamination from off-site sources of sediment contamination.

For those sediments existing at the contaminated site within the listed waterbody, the CWA-approved sediment management standards, with their required clean-up levels/goals, would apply. The TMDL will not include allocations to the contaminated sediments because they are not considered a source of their own contamination. Regarding the delisting of these waters, under current regulations, once a TMDL is approved by EPA, the water body can be removed from the §303(d) list.

Based on the aforementioned response, EPA believes it is appropriate to use Ecology's approved sediment management standards in the State of Washington's §303(d) listing process.

Issue 14

Commenter 3:

The documentation indicates that ten WRIA 9 Duwamish River sites were identified as failing marine numeric standards identified in the SMS. These waters are not marine but are low salinity sites. SMS for low salinity sites will be determined on a case by case basis. Recommend removing these because of inappropriate use of the marine sediment standards.

Response: Ecology considered listing the Duwamish based on compliance with the SMS. Therefore, EPA assumed the State did make a decision that the SMS do apply to this water body.

Issue 15

Commenter 2:

There were no clear criteria evident for why some new sediment stations were added to the list while other stations with similar characteristics were not added. EPA selected to add some parameters exceeding SQS at one station or cluster and did not add other SQS parameter excursions at the same station or cluster. We recommend that criteria be clearly articulated and applied before this listing proceeds.

Response: EPA's rationale for proposing to add water body/pollutant pairings to the list based on violations of sediment quality standards is fully explained in EPA's August 25, 1999, Partial Approval/Partial Disapproval letter to Ecology. See Enclosure, Section II, Part F, Item 2. Not Listing Waters Based on Excursions of the State's Sediment Management Standards. EPA proposed listing action

applies to those waters that Ecology did not list when sediment quality standards were exceeded but the confirmatory designation process had not been applied.

Issue 16

Commenter 2:

The proposed naphthalene addition in the Duwamish is unclear. Is EPA proposing to add Naphthalene from station cluster EB7 or EB8.

Response

In its Candidate Listing Decision Matrix, Ecology identified exceedances of the sediment quality standard for naphthalene in the Duwamish Waterway and River (new segment ID IG58VD - Township 24N - Range 04E - Section 07) at both EB7 and EB8. Therefore, data from both station clusters support the listing of this water body.

Single Excursion

Issue 17

Commenter 2:

EPA's single excursion additions to the §303(d) list that are the results of Ecology's application of the finer water body identification system do not seem to accurately define water quality impairments within those given segments. EPA's proposed listing additions should adhere to Ecology's listing policy for all segments including those resulting from the new identification and segmentation system. EPA explicitly concurred with Ecology's single excursion listing policy. See page 7 of EPA's August 25, 1999 decision letter.

Response

Ecology's "single excursion" policy was established to eliminate the anomaly excursion, the excursion truly not reflective of the water quality. EPA supports Ecology's policy when applied in this context. EPA agrees that support for this policy was expressed on page 7 of our August 25, 1999 decision letter. However, under Issue 5. Impacts of the New Water Body Identification System, page 14 of the same decision letter, EPA explains the basis for proposing to include waters where the new segmentation system redefined multiple excursions on a single water body to "single excursions" on multiple waters or water body segments. EPA believes these excursions do not reflect the "anomaly" excursion, but rather mask a water quality problem in a water body more finely divided by the new segmentation process.

The use of old Data

Issue 18

Commenter 2:

The data for the Duwamish sediment additions are old. We should be using the new data. See "Site Inspection Report, Lower Duwamish River (RK 2.5 to 11.5, Seattle, Washington, EPA Region 10/Westin, April 1999".

Response: EPA reviewed the “Site Inspection Report, Lower Duwamish River (RK 2.5 to 11.5, Seattle, Washington, EPA Region 10/Westin, Volume 2 - Map Folio, April 1999” as recommended by Commenter 2. For EPA’s proposed Duwamish River pollutant additions, either the pollutants were not monitored or the pollutants were found to exceed the sediment quality standard or the clean-up screening level. Therefore it is EPA’s decision to add the proposed Duwamish water body/ pollutant pairings to the State’s 1998 §303(d) list for violations of the sediment quality standards.

Listing of Puget Sound Waters for Low DO

Issue 19: Commenter 6:

Commenter provides information on how low dissolved oxygen (DO) from the Pacific Ocean water enters the Puget Sound through the Strait of Juan de Fuca and impacts the entire region. Commenter believes EPA does not understand how the state DO standard is applied, i.e., when natural levels of DO are below the water quality standard for that water, human caused decreases are allowed to degrade the DO level 0.2 mg/l. Because of the enormous size of some of these marine waters, it would be impossible for the existing anthropogenic sources of BOD loading to degrade the DO natural levels greater than 0.2 mg/L. The commenter recommends not listing Commencement Bay, Dalco Passage and Colvos Passage for DO.

Response

EPA understands that Washington’s water quality standards provide that “Whenever the natural conditions of said waters are of a lower quality than the criteria assigned, the natural conditions shall constitute the water quality standard”, WAC - 173-201A -070 (1). EPA also understands that, consistent with Washington’s water quality standards, when the natural conditions, such as up-welling occur, causing the DO levels to be depressed near or below the standard specific to that class of marine water, the natural DO levels may be degraded by up to 0.2 mg/L by human caused activities. (WAC 173-201A-030(1)(c)(ii)(B)). However, some marine waters do have the potential to be impacted by anthropogenic sources of pollution which could drive the natural levels of dissolved oxygen below the numeric water quality standard. For these waters, the existing low levels of dissolved oxygen are not a sole reflection of the natural condition, i.e., the water quality that was present before human-caused pollution. Rather, the levels would be a reflection of the anthropogenic pollution and the natural conditions. For these waters, the established numeric water quality criterion would apply rather than the natural condition of the water.

EPA proposed to list many of the Puget Sound waters for DO because the State did not provide adequate information to support its listing position. However, during EPA’s comment period for its proposed additions to the State’s 1998 §303(d) list, additional data/information were submitted by the State and others to

assist in making a final listing decisions for these waters. Most of the waters EPA proposed to add to the list will not be included on the final list because of the additional information/data provided to support not listing.

Issue 20

Colvos Passage

Commenters 2, 5 and 6:

The listing of Colvos Passage for dissolved oxygen is in error. Commenter 6 provides information on how low dissolved oxygen (DO) from the Pacific Ocean water enters the Puget Sound through the Strait of Juan de Fuca and impacts the entire region. Commenter believes EPA does not understand how the state DO standard is applied, i.e., when natural levels of DO are below the water quality standard for that water, human caused decreases are allowed to degrade the DO level 0.2 mg/l. Because of the enormous size of some of these marine waters, it would be impossible for the existing anthropogenic sources of BOD loading to degrade the DO natural levels greater than 0.2 mg/L.

Commenter 4:

The rationale in Ecology's decision matrix for both Dalco Passage/Poverty Bay and Colvos Passage, cites data from the same station, NRR001 (47 19.00, 122 32.91), located in the Tacoma Narrows off Point Defiance collected during 1985-1991. It seems that only one water body should contain this station/listing reason.

Regardless, the data from the Narrows are from a period of unreliable data. (See comments for the Nisqually Reach.) In addition, low DO concentrations are expected in this highly mixed area where deep waters are constantly up welled. Ecology abandoned this monitoring station due to its lack of utility in assessing anthropogenic effects on water quality(any signal would be mixed and diluted away). There are no monitoring data, to my knowledge, from these areas, but all are open, well mixed waters that I doubt would show anthropogenic impacts on DO.

Response: EPA's rationale for proposing to add this water body to the State's final 1998 §303(d) list was based on the State's failure to present adequate information/data to support its not listing because the "natural conditions" standard applies. EPA believes the information from Commenters 4 and 6 clarify and further support the State's rationale for not listing the water because the low DO levels are a reflection of the natural conditions and thus the "natural conditions" standard is being met. Therefore, based on responses from Commenters 4 and 6, EPA will not include Colvos Passage on the State's 1998 §303(d) because the low DO concentrations represent natural conditions and the "natural conditions" level is considered the water quality standard.

Issue 21

Quartermaster Harbor

Commenter 4

It was the commenter's opinion that the data collected from 1991 to 1996 in the outer portion of the Harbor reflected natural conditions. However, the commenter provides data collected in 1998 from the inner portion of the Harbor which shows very low dissolved oxygen concentrations. The commenter also provided that given the land-locked nature of the Harbor and the recent development in the area, anthropogenically caused pollutant loading could be contributing to the low DO levels. Commenter recommends the water body remain on the State's 1998 §303(d) list.

Response: Based on the data/information provided by Commenter 4, it is possible that the DO levels in the inner portion of Harbor are low because of anthropogenic causes rather than natural conditions. Thus, the "natural conditions" standard should not be applied to the water body as a whole. Rather, listing should be based on the compliance with the numeric water quality criterion. EPA will add Quartermaster Harbor to the State's 1998 §303(d) list because of exceedances of the DO numeric water quality criterion for marine waters.

Issue 22

Admiralty Inlet Inner

Commenter 4

Commenter 4 provided the following information and data relevant to sampling points ADM001 and ADM002 in Admiralty Inlet.

Low DO from Admiralty Inlet are clearly seen in the data from 1950s and 1960s collected by the University of Washington. This is an oceanic signal, as seen from the Excel graphics (see attached "figs.xls") showing DO of waters coming in through the Strait and how this is influenced by oceanic signal. Low DO concentrations at these stations are typically natural, reflecting up welled, naturally low oxygenated Pacific Ocean waters that flow eastwards in through the Strait of Juan de Fuca beneath a less-saline surface layer flowing westwards. Deep oceanic waters have low DO content due to an extended isolation from the surface and direct consumption of oxygen through respiration. Deep Pacific Ocean waters off the Washington shelf at Copalis have DO concentrations as low as 3 mg/l. When up welling-favorable winds are present (late summer- fall), deep waters flowing in through the Strait of Juan de Fuca will have low DO concentrations. This deep water will shoal when passing over the sill at Admiralty Inlet and mix with higher oxygenated waters as it enters Puget Sound.

Station ADM002 is a moderately deep station (@70 m) located in the Strait of Juan de Fuca off the Quimper Peninsula. Physically quite dynamic, stratification is more likely to be evident from May through September but is not always strongly developed and the pycnocline depth is quite variable. Station ADM001 is located south of the Admiralty Inlet sill in deep (80-100 m) waters. Like ADM002 this station is very dynamic physically. Note that low DO is found at ADM001 much

less frequently than at ADM002. This likely reflects the mixing and aeration that water masses receive when flowing past the entrance sill at Admiralty Inlet. This is the first year ADM001 has recorded DO concentrations <5 mg/L though it has only been monitored since WY 1993. The lowest DO recorded previously was 6 mg/L. The minimum DO observed seasonally at ADM002 has varied between 4.6 and 5.3 mg/l from WY 1990 through 1995.

Commenter 5

Low dissolved oxygen water from the Pacific is brought close to the surface in the summer due to coastal upwelling. The dense, naturally low DO water works its way into the Strait of Juan de Fuca and is mixed with outflowing Puget Sound Water in Admiralty Inlet. The mixture then forms the incoming deep water for Puget Sound. When low dissolved oxygen is observed in Admiralty Inlet, it is a result of the coastal upwelling and the active mixing in Admiralty Inlet that brings this water closer to the surface. There are no feasible human inputs of sufficient magnitude to produce DO decreases that violate the state's standards in Admiralty inlet.

Response: EPA's rationale for proposing to add this water body to the State's final 1998 §303(d) list was based on the State's failure to present adequate information/data to support its not listing because of "natural conditions" standard was being met. EPA believes the information from Commenters 4 and 5 clarify and further support the State's rationale for not listing the water because natural conditions are causing the low DO levels. Therefore, based on responses from Commenters 4 and 5, EPA will not include Admiralty Inlet on the State's 1998 §303(d) because the low DO concentrations represent natural conditions and the "natural conditions" level is considered the water quality standard.

Issue 23:

Penn Cove

Commenter 4

Based on extreme stratification (due to the Skagit River), the land-locked nature of the Cove, and the slow circulation, the smallest of human influences could produce more phytoplankton (from nutrient input to persistently stratified waters) and thus increase the oxygen debt in the bottom waters. Due to the anoxia that has been observed in Penn Cove and the degree of human settlement around its shorelines, it is my opinion that anthropogenic influence on the DO concentrations is very likely.

Response: Based on the data/information provided by commenter 4, EPA will add Penn Cove to the State's 1998 §303(d) list because the data show that the numeric water quality criterion for DO is being exceeded.

Issue 24:

Saratoga Passage

Commenter 4

This is a large system not easily subject to human perturbation. Low DO is well known in this region historically. However, there are two anthropogenic factors that could stimulate a negative effect on the DO concentrations. First, the Skagit River is responsible for nutrient loading which if significant would certainly fuel more phytoplankton growth in these persistently stratified waters and affect bottom water DO. Second, the impacts from Possession Sound, where we are seeing quite large phytoplankton blooms and possible DO deterioration, may extend into Saratoga Passage. This area has not been adequately studied to evaluate water mass movement, phytoplankton and DO dynamics. It is thus difficult to assess the degree of anthropogenic impact on the system.

Commenter 5

Ecology's explanation that low dissolved oxygen Saratoga Passage is associated with natural stratification is correct. It is certainly appropriate to understand how stratification affects dissolved oxygen and to take such conditions into consideration when evaluating possible human impacts, but the state's dissolved oxygen standards still allow for a small (0.2 mg/l) human caused change to occur. (Note also that EPA's 1986 DO criteria allow a 10% decrease from human causes when the natural level is lower than the numeric standard) For Saratoga Passage, there are no human inputs of sufficient magnitude to produce a DO decrease that violates the State's standards.

Response: Based on the data/information provided there is a level of uncertainty in applying the "natural conditions" standard to this water body. Where uncertainty exist in determining which standard is appropriate to apply, EPA will base listing on the established numeric water quality standard. Monitoring data have shown exceedances of the numeric water quality standard. Therefore, EPA will include this water body on the State's final 1998 §303(d) list.

Issue 25: ***Dabob Bay and Quilcene Bay***

Commenter 4

Ecology has never occupied a monitoring station in these locations. Dabob Bay is known to have low DO concentrations (Collias et al., 1974) but this is natural condition due to its depth, stratification, lack of mixing and fjord-like bathymetry with an entrance sill. I am not aware of any recent data from this area showing a decline of DO concentrations from historical levels; thus listing seems inappropriate.

Response: The State identified in it's proposed §303(d) list that eleven excursions beyond the DO criterion were collected from ambient monitoring station HCB002 for this water body between 1984 and 1987, and that the excursions were due to natural conditions. Based on the information provide by Commenter 4 regarding the natural features of the water body which contribute to the up welling of low

DO waters, EPA decision is to not list this water body because the low DO concentrations represent natural conditions and the “natural conditions” level is the water quality standard.

Issue 26: ***Commencement Bay (outer)***

Commenter 4: also see Issue 19 Commenter 6's response

The degree of anthropogenic influence on this area is difficult to access. The data observed at this deep station during 1995-97 were not significantly lower than that observed entering Puget Sound, but occurrences were more frequent. The proximity of the station to the industrialized Port of Tacoma and to Puyallup River nutrient input, make human influence a possibility. However, historical data (1950-60s) from Collias et al. 1974 show values as low as 0.31 mg at /L which translates to 5 mg/l in the vicinity of this station. I would use the same logic for listing or not as with Saratoga Passage.

Also, see comment letter from Jan Newton: A core station, CMB003, has not shown low DO concentrations over the period since 1992 when >30-m profile data have been obtained until WY 1996 and 1997. The values recorded are not much below 5 mg/l and so may not implicate large changes. Continued monitoring is recommended

Response: Based on the data/information provided there is a level of uncertainty in applying the “natural conditions” standard to this water body. Where uncertainty exist in determining which standard is appropriate to apply, EPA will base listing on the established numeric water quality standard. Monitoring data have shown exceedances of the numeric water quality standard. Therefore, EPA will include this water body on the State’s final 1998 §303(d) list.

Issue 27: ***Nisqually Reach/Drayton Passage***

Commenter 4

The data identified in the decision matrix for listing this water are from low DO events observed at NSQ001 (47.112, 122697) during 1986, 1987 and 1990. All of the data were obtained before Ecology invested in a state of the art CTD unit. The analysis equipment and methods used prior to 1991 were not highly reliable (lacking proper maintenance and calibration). New data collected during 1997 at NSQ002 (47.168, 122.787), farther out in the main channel, show the lowest DO concentrations observed were between 5.1 and 6.0 mg/l during August and September. These DO concentrations, however, are higher than those observed in the other deep basins of Puget Sound and indicate natural conditions. The near shore environments of the Reach likely could have lower DO concentrations, but no data exist, to my knowledge. This listing is inappropriate.

Response: EPA proposed to add this water body to the State’s 1998 §303(d) list because data/information were not provided to support the State’s position that the

three recorded excursions between 10/86 and 10/90 reflected natural conditions. The additional information provided by Commenter 4 further explains the State's rationale. Based on this additional information, EPA's decision is to not add this water body to the State's 1998 §303(d) list because the excursions are a reflection of the water body's natural conditions and the "natural conditions" level is the water quality standard.

Issue 28: ***Dalco Passage/Poverty Bay***

Commenter 4; also see Issue 19 Commenter 6's Response

The rationale in Ecology's decision matrix for both Dalco Passage/Poverty Bay and Colvos Passage, cites data from the same station, NRR001 (47 19.00, 122 32.91), located in the Tacoma Narrows off Point Defiance collected during 1985-1991. It seems that only one water body should contain this station/listing reason.

Regardless, the data from the Narrows are from the period of unreliable data (see Nisqually paragraph, above), but, in addition, we would expect low DO concentrations in this highly mixed area where deep waters are constantly up welled. Ecology abandoned this monitoring station due to its lack of utility in assessing anthropogenic effects on water quality(any signal would be mixed and diluted away). There are no monitoring data, to my knowledge, from these areas, but all are open, well mixed waters that I doubt would show anthropogenic impacts on DO.

Response: EPA proposed to add this water body to the State's 1998 303(d) list because adequate information was not provided to support the State's position that the low DO was caused by stratification. The additional information provided by Commenter 4 further explains the State's rationale. Based on this additional information, EPA's decision is to not add this water body to the State's 1998 §303(d) list because the excursions are a reflection of the water body's natural conditions and the "natural conditions" level is the water quality standard.

Listing Commencement Bay for Copper - Single Hits/Recent Data Shows Compliance with Criteria

Issue 29: Commenter 6

The Commenter indicates that the 1983 copper monitoring data, the copper data used to identify water quality standards excursions, were not likely collected under clean or ultra clean conditions, do not reflect current conditions, and were not for the "dissolved" fraction of copper. The commenter also provided additional information indicating that more recent data show that dissolved copper concentrations are below the water quality standard.

Response

EPA agrees with the comment that more recent data show that the dissolved copper meet the State's water quality standard. Ecology's report "Metals Concentrations

in Commencement Bay Waterways During 1997 - 1998", Washington Department of Ecology, February 1999" show that the copper water quality criterion was being achieved in Inner Commencement Bay. EPA also discussed the report's findings with Art Johnson from the Environmental Assessment Program, Washington Department of Ecology. Mr. Johnson agreed that the more recent data do not show copper criterion violations. EPA decision is to not list this water body for dissolved copper because data in the aforementioned report show that the copper water quality standard is being achieved.

Listing Waters for which TMDLs Have Been Completed and Approved By EPA

Issue 30: Commenter 7

EPA listed the following waters for which TMDLs were completed and approved by EPA: Snipes Creek, Lower Yakima basin (SL56UX) for DDT, and two segments of Spring Creek in the Lower Yakima basin (KM06JM) for DDD and DDE (for each segment). Because approved TMDLs were completed for listed water body and pollutants, these waters do not need to be included on the State's §303(d) list.

Response: EPA agrees with the commenter. It is the State of Washington's policy to not list water quality limited waters when TMDLs have been submitted to and approved by EPA for those water body/pollutant listings. EPA erred in its proposal to add these waters. These waters will not be added to the State's 1998 §303(d) list.

State Listed waters on the Lummi Reservation

Issue 31: Commenter 8

Although Ecology and the Lummi Indian Nation agreed that Lummi Indian Reservation waters would not be included on the State's 1998 §303(d) list, a portion of the reservation is included on a map of the State's 1998 §303(d) listed waters. The Lummi Indian Nation and Ecology agree the problem lies with the mapping tool. However, the Lummi Nation indicates the State had agreed but failed to include an entry in the State's final decision matrix appropriately characterizing this issue.

Response: EPA recognizes the Lummi Nation's concern of misrepresenting Tribal waters as State water quality limited waters. In the Ecology-Tribal Co-Government §303(d) Listing Conferral Process, EPA and Ecology agreed to not list waters in Indian Country. In the Enclosure to its August, 25, 1999 decision letter regarding the State's 1998 §303(d) list (Enclosure, III. Water bodies Within Indian Country), EPA addresses the issue of the State's listing of waters within Indian Country. EPA is taking no action to approve or disapprove Washington's list with respect to listed waters in Indian Country. EPA will recommend to

Ecology that measures be taken to clarify the possible confusion caused by the mapping tool.

Ecology's Segmentation System

Issue 32: Commenter 8

Ecology's re-segmenting of water bodies mid-way through the 1998 listing process essentially de-listed large areas without public input. Additional data showing impairment could have been submitted if the public knew a segment was going to be delisted due to the new segmentation system. Delisting large portions can only be justified with fate and transport modeling.

Response: EPA partially agrees with the commenter. See "Section IV. General Comments" of the Enclosure to EPA's August 25, 1999 decision letter. The decision to more finely segment water bodies should have been presented to the public during the State's proposed listing process.

In its review of the State's final submittal, EPA did work closely with Ecology to ensure that the appropriate waters or water body segments were listed. (Item 5, Part F, Section II, of the Enclosure to EPA's August 25, 1999 decision letter.)

EPA recognizes that there are no requirements in establishing geographical boundaries of waters or water body segments for listing purposes. EPA also recognizes that by changing from a coarser to a finer segmentation system, the mapped pictorial of the State's water quality limited waters will be considerably different because fewer river miles will appear on the map. However, when the TMDLs are developed for the listed waters or water body segments, the extent of the impairment will have to be determined. If the impairment extends to unlisted waters (those water body segments of the same larger water body, which were not listed because data/ information were not provided/available to support listing), those waters will have to be addressed in the TMDL as well.

Waters with other pollution controls should not be listed; also reasonable assurance of implementation of controls.

Issue 33: Commenter 9

According to the Department of Ecology's listing guidance, waters with "other pollution controls" should not be listed. The Greenwater River and Clearwater Rivers in the White River Basin have an "other pollution control" in place via the White River Spring Chinook Habitat Guidance. EPA previously supported the other pollution control approach for these streams, and thus should not list these water bodies.

Response: The White River Spring Chinook Habitat Guidance proposes addressing habitat and temperature impairments through a water quality management

approach. This approach, which according to the document was supported by Ecology and EPA, should qualify as an “other pollution control.” EPA agrees that they supported the approach, but a document laying out an approach does not constitute an “other pollution control.” An “other pollution control” must meet several requirements. These requirements are not met in this document nor under the current circumstances.

EPA participated in the document’s development, and concurred in its conclusion to use an “other pollution control” approach in place of developing TMDLs. The document in itself, however, does not meet the requirements of an “other pollution control.” Among other elements, an other pollution control requires enforceable management measures; and the prescriptions being developed for the Clearwater River to address the temperature impairment still are not complete. In addition, the DNR- and Weyerhaeuser-led prescription efforts do not address the Greenwater River. Thus the Greenwater River would not be eligible.

Listing Rocky Ford Creek

Issue 34: Commenters 10, 11, 12, and 13

Rocky Ford Creek, Grant county, has two pH exceedances, one each at two adjacent monitoring stations. Commenters argue that two hits are inadequate data for listing, and furthermore, the cause of the impairment is natural conditions. In addition, the source and cause of the pH excursions are unknown and therefore the water should not be listed.

Response: Rocky Ford Creek was listed for pH on the 1996 list. Ecology excluded this water body from listing in 1998 because of a segment description error that caused the data to be described as two single hits in adjacent segments of the same water body. In actuality, the two excursions occurred in the same water body segment. Thus there are two pH excursions, and consistent with Ecology’s listing policy, Rocky Ford Creek should be listed.

Regarding natural conditions, commenters say that the pH is high at the spring that is the source for Rocky Ford Creek. One commenter refers to historic Bureau of Reclamation data that show high pH levels before irrigation in the Columbia Basin. Another commenter refers to local testing showing nearly constant pH levels, and very high levels at the spring source. The comment letters did not provide the copies of the data to which they referred. This information might have been strong evidence supporting the natural conditions claim. EPA and/or Ecology need to see this type of information in order to confirm that two pH excursions are due to natural conditions. EPA and Ecology cannot remove this water from the §303(d) list without substantiated information or data supporting the natural conditions claim.

We also note that Ecology did not apply the natural conditions provision to Rocky Ford Creek in the 1996 or 1998 listing. We presume that if Ecology had sufficient information or data supporting the elevated pH as due to natural conditions, Ecology would not have listed Rocky Ford Creek.

In response to the commenters' concern that water should not be listed because the cause and source are unknown, identifying the causes or sources of the exceedance is not a prerequisite for listing waters based on violations of numeric water quality standards. If, as part of the water body assessment, it is determined that the violations are due to natural causes, then, based on the State of Washington's water quality standards, the "natural conditions" become the basis for listing. The water would not be listed in the next listing cycle.

Listing of Padilla and Fidalgo Bays for Bis (2-ethylhexyl) Phthalate

Issue 35: Commenter 14 (and 15)

The Commenter questioned the State's rationale, i.e., "lack of confirmatory designation" (See WRIA 3, Page 31, Appendix K - the Candidate Listing Decision Matrix, June 15, 1998) for not including the water body on the list. The commenter submitted data and information to the State during the State's public comment period for its 1998 proposed 303(d) list, contending that the data used to support listing likely reflected sample contamination rather than the actual presence of the contaminant in the sediments. The commenter indicated the State supported his position and had agreed not to list the water based on sample contamination rather than the actual presence of the contaminant in the sediments.

Commenter also provided to EPA more recent monitoring data for this water body indicating that Bis (2-ethylhexyl) Phthalate was not present at levels above the SQS.

Response - EPA reviewed the State's response to the letter the commenter submitted during the State's 1998 proposed 303(d) listing process. The State, in its response to the Commenter's submittal (Response 21, Appendix G - Responses to Comments Received on the Proposed List, Item III. (1)(I), in the Administrative Record), agreed with the commenter and indicated this data would not be used to place the segment on the candidate list for this parameter.

EPA also reviewed the new data submitted by the commenter ("Survey for Petroleum and Other Chemical Contaminants in the Sediments of Fidalgo Bay", Washington Department of Ecology, November 1997).

Based on the State's response it appears the State intended not to list the water because of sample contamination. However, in its Candidate Decision Matrix, Ecology provide a different rationale for not listing. EPA is uncertain why the

State proposed not to list the water based on “lack of confirmatory designation” rather than the rationale provided in the response to the commenter’s letter. EPA believes the large differences in the split sample results certainly raise questions regarding the validity of the sample used to support listing the water body. More importantly, the additional data provided by the commenter do not show that Bis (2-ethylhexyl) Phthalate is present at levels above the sediment quality standard. Therefore, EPA will not add this water body to the State’s 1998 §303(d) list because data show the sediment quality standard for Bis (2-ethylhexyl) Phthalate is not being violated.

Failure to List Lake Sammamish

Issue 36: Commenter 16:

The commenter recommends listing Lake Sammamish for phosphorus, temperature and dissolved oxygen. Commenter indicates that the Water Quality Management Plan is not working and cites EPA guidance clarifying that the water needs to be listed.

Response: EPA’s comment period (as indicated in the public notice) was in regard to the specific waters EPA proposed to add to the State’s 1998 §303(d) list. EPA appreciates the commenter’s participation in the comment period and concern for the water quality status of Lake Sammamish. EPA recommends the commenter submit the information during the State’s next §303(d) listing cycle.

Sequim Bay Inappropriately Listed for PAHs

Issue 37: Commenter 17

Commenter does not discuss EPA’s rationale for proposing to retain Sequim Bay on the list, i.e., for violations of sediment quality standards. Rather, the commenter questions the validity of the data used to consider the water body for listing in the first place. Specifically the commenter makes the point that the data used were “sediment trap” data. The commenter states that data collected from sediment traps should not be used for listing because there are no sediment quality standards for sediment trap samples. Sediment grab samples for this site are below SQS.

Commenter 18:

See previous comment. In addition, the commenter indicates that Total Organic Carbon (TOC) concentrations need to be determined if SQS values are to be determined and that no TOC concentrations were determined as part of the original report. The commenter provides additional information regarding the methodology and provides an estimate of the PAHs based on an estimate of the TOC sediment concentrations. Estimates provided indicate that the SQS would not have been exceeded if appropriate methodology would have been used. Thus, the commenter concludes that without the appropriate data, one can not determine whether or not SQS were violated. Secondly, the commenter indicates that the

original listing of the entire Sequim Bay was based on Ecology's use of a coarse GIS system. With the finer segmentation process, and the fact that additional sediment samples outside John Wayne Marina did not show SQS violations, violations outside of JWM have not occurred and that not all Sequim Bay should be listed.

Response: Ecology did not list Sequim Bay (old ID # WA-17-0050, new water body grid # 48123A0H4, Lat. 48.073 and Long. 123.045) on its final 1998 §303(d) because the confirmatory designation procedures for site identification had not been applied to the cited data. EPA disagreed with Ecology's rationale to not list this water body and proposed to add this water body assuming monitoring data showed exceedances of the sediment quality standards. See EPA's Response to comments 1 - 13 above.

In response to Commenters 17 and 18, EPA reviewed the data considered in Ecology's 1998 proposed listing of Sequim Bay. These data were primarily sediment trap data with a small set of sediment data. EPA found that none of the sediment data exceeded the sediment quality standards. EPA also found that none of the sediment trap data exceeded the sediment quality standards although some of the data exceeded the apparent effects threshold (AET). Although exceedance of the AETs may identify an area of concern warranting further monitoring, exceedance of AETs does not equate to a violation of the State's sediment quality standard. Based on EPA's finding that data did not show that the sediment management standards were being violated, EPA will not include this water body on the State's 1998 §303(d) list.

Issue 37:

Commenter 19

EPA did not give formal notification to the Squaxin Island Tribe or other Tribes of its listing decision.

Response: As part of its notification process for its decision on the State's final 1998 §303(d) List, EPA filed a news release, public noticed its action in several news papers throughout the State, and placed a notice of its decision and opportunity to comment, and a copy of its decision letter on its Web site. EPA believed these measures provided thorough distribution of the action taken. However, in future actions EPA takes on the State's final list, EPA is willing to work with the Squaxin Island Tribe or other Tribes to ensure better distribution of the final decision action.

Listing of Ebey Slough

Issue 38:

Ecology proposed to not list Ebey Slough, (old id # WA-07-01011, new ID #PR16VH, T30N - R05E - S32) for excursions of the dissolved oxygen criterion because the excursions were a result of "natural conditions" (stratification) and the "natural conditions" were the standard. EPA proposed to add the water to the

State's 1998 §303(d) because adequate information/data had not been submitted to support the State's rationale to not list this water. No comments were received on EPA's action to include this water body.

However, EPA, in its review of the State's final "Snohomish River Estuary Total Maximum Daily Load- Submittal Report, August 1999", did identify additional information/data regarding the application of the "natural conditions" standard to this water body. EPA believes the following additional information supports retaining this water on the State's 1998 §303(d) list.

Page 10 of Ecology's "Snohomish River Estuary Total Maximum Daily Load - Submittal Report, August 1999", indicates that:

The dissolved oxygen profiles for the mainstem and sloughs show that the predicted minimum dissolved oxygen values without loading are below the marine criteria for part of the modeled system. At high tide the marine dissolved oxygen criterion of 6.0 mg/l would apply to all of the segments in the lower river and sloughs.

Based on this TMDL study, the modeled natural dissolved oxygen levels during high tides do not drop below the marine standard of 6.0 mg/l. However, during slack tides, the natural dissolved oxygen levels are at or near 6.0 mg/l (6.01 mg/l). The State's standard provides that when natural dissolved oxygen levels are near or below 6.0 mg/l, which is representative of the modeled slack tide conditions in the Snohomish TMDL, a 0.2 mg/l level of dissolved oxygen degradation due to anthropogenic loading, may be allowed. The study also showed that the 0.2 mg/l allowable degradation was being exceeded. The exceedance of the 0.2 mg/l allowable degradation represents a violation of the "natural condition" standard. Based on the violation of the "natural condition" standard EPA will add Ebey Slough to the State's 1998 §303(d) list.